

**MATERIAL SAFETY DATA SHEET****1H-TETRAZOLE, 98%****SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION****MSDS Name: 1H-tetrazole, 98%****Company Identification**

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**SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS**

CAS#	Chemical Name	%	EINECS#
288-94-8	1H-Tetrazole,	98%	206-023-4

Hazard Symbols: O

Risk Phrases: 5

**SECTION 3 - HAZARDS IDENTIFICATION - EMERGENCY OVERVIEW****Appearance:-** white fine crystalline powder.**Target Organs:** None.**Potential Health Effects :-** The toxicological properties of this material have not been investigated. Use appropriate procedures to prevent opportunities for direct contact with the skin or eyes and to prevent inhalation.**SECTION 4 - FIRST AID MEASURES****Eyes:-** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids.**Skin:-** Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.**Ingestion:-** Do NOT induce vomiting. Allow the victim to rinse his mouth and then to drink 2-4 cupfuls of water, and seek medical advice.**Inhalation:-** Remove from exposure to fresh air immediately.**Notes to Physician:-** Treat symptomatically and supportively.**SECTION 5 - FIRE FIGHTING MEASURES**

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**General Information:-** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**Extinguishing Media:-** In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.

**Autoignition Temperature:-** Not available.

**Flash Point:-** 220 deg C ( 428.00 deg F)

**NFPA Rating:-** Not published.

**Explosion Limits, Lower, Upper:-** Not available.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

**General Information:-** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:-** Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal.

## SECTION 7 - HANDLING and STORAGE

**Handling:-** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.

**Storage:-** Store in a cool, dry place. Keep container closed when not in use.  
Refrigerator (approx 4°C).

## SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

**Engineering Controls:-** Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
1H-Tetrazole, 98%	none listed	none listed	none listed

**OSHA Vacated PELs:-** 1H-Tetrazole, 98%:  
No OSHA Vacated PELs are listed for this chemical.

### Personal Protective Equipment

**Eyes:-** Wear safety glasses and chemical goggles if splashing is possible.

**Skin:-** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Clothing:-** Wear appropriate protective clothing to minimize contact with skin.

**Respirators:-** Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

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**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

Physical State	Not available.	Odor:	None reported.
Appearance	white	pH:	Not available.
Vapor Density:	Not available.	Vapor Pressure:	Not available.
Evaporation Rate:	Not available.	Viscosity:	Not available.
Boiling Point:	@ 760.00mm Hg	Freezing/Melting Point	156- 158 deg C
Decomposition Temperature	220 deg C	Solubility:	23g/100ml (20 c)
Specific Gravity/Density	Not available.	Molecular Formula	CH <sub>2</sub> N <sub>4</sub>
		Molecular Weight	70.04

**SECTION 10 - STABILITY AND REACTIVITY**

Chemical Stability:- Stable under normal temperatures and pressures.

Conditions to Avoid:- Incompatible materials, strong oxidants.

Incompatibilities with Other Materials:- Strong oxidizing agents - strong acids - acid chlorides - acid anhydrides.

Hazardous Decomposition Products:- Nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, nitrogen.

Hazardous Polymerization:- Has not been reported.

**SECTION 11 - TOXICOLOGICAL INFORMATION**

RTECS#:- CAS# 288-94-8 unlisted.

LD50/LC50:- Not available.

Carcinogenicity:- 1H-Tetrazole, 98% -

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

**SECTION 12 - ECOLOGICAL INFORMATION**

Ecotoxicity:- Not available.

**SECTION 13 - DISPOSAL CONSIDERATIONS**

Dispose of in a manner consistent with federal, state, and local regulations.

**RCRA D-Series** Maximum Concentration of Contaminants: None listed.

**RCRA D-Series** Chronic Toxicity Reference Levels: None listed.

**RCRA F-Series:** None listed.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

Not listed as a material banned from land disposal according to RCRA.

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**SECTION 14 - TRANSPORT INFORMATION**

US DOT :- No information available  
 IMO :- Not regulated as a hazardous material.  
 IATA :- Not regulated as a hazardous material.  
 RID/ADR :- Not regulated as a hazardous material.  
 Canadian TDG :- No information available.

**SECTION 15 - REGULATORY INFORMATION****US FEDERAL****TSCA**

CAS# 288-94-8 is not listed on the TSCA inventory. It is for research and development use only.

**Health & Safety Reporting List** :- None of the chemicals are on the Health & Safety Reporting List.

**Chemical Test Rules** :-None of the chemicals in this product are under a Chemical Test Rule.

**Section 12b** :- None of the chemicals are listed under TSCA Section 12b.

**TSCA Significant New Use Rule** :- None of the chemicals in this material have a SNUR under TSCA.

**SARA :-**

Section 302 (RQ) :- None of the chemicals in this material have an RQ.

Section 302 (TPQ) :- None of the chemicals in this product have a TPQ.

Section 313 :- No chemicals are reportable under Section 313.

**Clean Air Act**:-This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

**Clean Water Act**:- None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA**:- None of the chemicals in this product are considered highly hazardous by OSHA.

**STATE**

1H-Tetrazole, 98% is not present on state lists from CA, PA, MN, MA, FL, or NJ. California

No Significant Risk Level: None of the chemicals in this product are listed.

**European/International Regulations**

European Labeling in Accordance with EC Directives

Hazard Symbols: O

Risk Phrases:

R 5 Heating may cause an explosion.

Safety Phrases:

WGK (Water Danger/Protection)

CAS# 288-94-8: No information available.

Canada

None of the chemicals in this product are listed on the DSL/NDSL list.

WHMIS: Not available.

CAS# 288-94-8 is not listed on Canada's Ingredient Disclosure List.

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**SECTION 16 - ADDITIONAL INFORMATION**

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect touch information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall Alkali Metals Ltd., be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Alkali Metals Ltd., has been advised of the possibility of such damages.

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